

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION**

*Walters et al. v. City of Flint et al.*

Case No. 5:16-cv-10164-JEL-MKM  
Honorable Judith E. Levy

---

**PLAINTIFFS' RESPONSE TO VNA'S MOTION TO EXCLUDE THE  
TESTIMONY AND REPORTS OF JOSEPH GRAZIANO, PH.D.**

## TABLE OF CONTENTS

TABLE OF AUTHORITIES.....	ii
INTRODUCTION.....	1
BACKGROUND.....	3
I.    Dr. Graziano is exceptionally qualified.....	3
II.   The dangers of lead exposure are well known and well documented. ....	3
III.  Numerous adverse health outcomes have been linked to childhood lead exposure.....	4
IV.   The cumulative burden of lead exposure .....	6
ARGUMENT .....	7
V.    Dr. Graziano’s testimony is admissible under Federal Rule of Evidence 702.....	8
A.  Legal standard under Federal Rule of Evidence 702.....	8
B.  Dr. Graziano is Plaintiffs’ general causation expert and Dr. Bithoney is Plaintiffs’ specific causation expert.....	11
C.  Dr. Graziano’s opinion that there is “no safe level” of lead and that any “undue exposure” is harmful is admissible because it is reliable and helpful to the trier of fact. ....	14
1. Dr. Graziano should be permitted to testify that there is no safe level of lead exposure.....	14
2. Dr. Graziano does not concede that there is a safe level of lead exposure. ....	18
E.  The peer-reviewed literature Dr. Graziano cites supports his opinion.....	22
F.  Dr. Graziano’s opinions concerning potential health effects are admissible.....	25
VI.   Dr. Graziano’s opinions “fit” the facts of this case.....	28
VII.  There is no basis to exclude Dr. Graziano’s brief commentary on the background of the Flint Water Crisis.....	29
CONCLUSION .....	30
CERTIFICATE OF SERVICE.....	31

## TABLE OF AUTHORITIES

### Cases

<i>A Cmty. Voice v. EPA</i> , 997 F.3d 983 (9th Cir. 2021).....	16
<i>Adkisson v. Jacobs Eng’g Grp.</i> , 342 F. Supp. 3d 791 (E.D. Tenn. 2018).....	12
<i>Allen v. Pennsylvania Eng’g Corp.</i> , 102 F.3d 194 (5th Cir. 1996) .....	20
<i>Bosland v. Warnock Dodge, Inc.</i> , 197 N.J. 543 (2009).....	22
<i>C.W. v. Textron, Inc.</i> , Case No. 3:10 CV 87, 2014 U.S. Dist. LEXIS 34938 (N.D. Ind. Mar. 17, 2014) .....	21
<i>Carroll v. John Crane, Inc.</i> , Case No. 15-cv-373, 2017 U.S. Dist. LEXIS 105556(W.D. Wisc. July 17, 2017) .....	18
<i>Daubert v. Merrill Dow Pharms.</i> , 509 U.S. 579 (1993).....	passim
<i>Gonzalez Prod. Sys. v. Martinrea Int’l Inc.</i> , Case No. 13-cv-11544, 2015 U.S. Dist. LEXIS 106480 (E.D. Mich. Aug. 13, 2015) .....	10, 25
<i>In re Heparin Prods. Liab. Litig.</i> , 803 F. Supp. 2d 712 (N.D. Ohio 2011).....	23
<i>In re Iron Workers Local 25 Pension Fund</i> , Case Nos. 04-cv-40243, 07-cv-12368, 2011 U.S. Dist. LEXIS 34505 (E.D. Mich. Mar. 31, 2011) .....	19
<i>In re Mirena IUS Levonorgestrel-Related Prods. Liab. Litig.</i> , 341 F. Supp. 3d 213 (S.D.N.Y. 2018).....	26
<i>In re Northwest Airlines Corp. Antitrust Litig.</i> , 197 F. Supp.2d 908 (E.D. Mich. 2002) .....	28
<i>In re Scrap Metal Antitrust Litig.</i> , 527 F.3d at 530 .....	3, 8, 11
<i>In re W.R. Grace &amp; Co.</i> , 355 B.R. 462 (D. Del. Bankr. Ct. 2006).....	21
<i>Jesa Enters. v. Thermoflex Corp.</i> , 268 F. Supp. 3d 968 (E.D. Mich. 2017) .....	17
<i>Johnson v. Manitowoc Boom Trucks, Inc.</i> , 484 F.3d 426 (6th Cir. 2007).....	10

<i>Knight v. Boehringer Ingelheim Pharms., Inc.</i> , 323 F. Supp. 3d 837 (S.D. W. Va. 2018) .....	23
<i>Kumho Tire Co. v. Carmichael</i> , 526 U.S. 137 (1999).....	9
<i>Mahaney v. Novartis Pharms. Corp.</i> , Case No. 1:06-CV-00035-R, 2011 U.S. Dist. LEXIS 156848 (W.D. Ky. Sept. 12, 2011) .....	23
<i>Matrixx Initiatives, Inc. v. Siracusano</i> , 563 U.S. 27 (2011).....	21
<i>Micro Chem., Inc. v. Lextron, Inc.</i> , 317 F.3d 1387 (Fed. Cir. 2003).....	11, 25
<i>Nelson v. Tennessee Gas Pipeline Co.</i> , 243 F.3d 244 (6th Cir. 2001) .....	9, 13, 17
<i>Nemeth v. Brenntag N. Am.</i> , 183 A.D.3d 211 (1st Dep’t 2020).....	16
<i>Pan Am Grain Mfg. Co. v. P.R. Ports Auth.</i> , 295 F.3d 108 (1st Cir. 2002) .....	22
<i>Phillips v. Cohen</i> , 400 F.3d 388 (6th Cir. 2005) .....	24
<i>Pipitone v. Biomatrix, Inc.</i> , 288 F.3d 239 (5th Cir. 2002).....	11
<i>Pluck v. BP Oil Pipeline Co.</i> , 640 F.3d 671 (6th Cir. 2011) .....	13
<i>Poulis-Minott v. Smith</i> , 388 F.3d 354 (1st Cir. 2004) .....	21
<i>Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co.</i> , 161 F.3d 77 (1st Cir. 1998).....	10
<i>Rupersburg v. Etkin Skanska Constr. Co.</i> , Nos. 262388, 262406, 262470, 262471, 262560, & 262561, 2006 Mich. App. LEXIS 3974, (Mich. Ct. App. 2006).....	27
<i>Sterling v. Velsicol Chem. Corp.</i> , 855 F.2d 1188 (6th Cir. 1988) .....	27
<i>Sutera v. Perrier Group of Am.</i> , 986 F. Supp. 655 (D. Mass. 1997).....	20, 21
<i>United States v. Gissantaner</i> , 990 F.3d 457 (6th Cir. 2021) .....	9
<i>United States v. Langan</i> , 263 F.3d 613 (6th Cir. 2001).....	9
<i>United States v. N.Y. City Hous. Auth.</i> , 347 F. Supp. 3d 182 (S.D.N.Y. 2018) .....	16
<b>Statutes</b>	
Federal Rules of Evidence 402 .....	2
Federal Rules of Evidence 403 .....	2

Federal Rules of Evidence 702..... passim

## Other Authorities

- A. Aizer et. al., *Lead and Juvenile Delinquency: New Evidence from Linked Birth, School and Juvenile Detention Records*, Working Paper 23392. Cambridge, MA: National Bureau of Economic Research (2017) available at <https://www.nber.org/papers/w23392> (last accessed Jul. 27, 2021) .....6
- A.B. Hill, *The environment and disease: association or causation?* 1965, 108 J. R. Soc. Med. 32 (2015) .....7
- Ana Navas-Acien, *Lead Exposure and Cardiovascular Disease—A Systematic Review*, 115(3).....24, 28
- ATSDR, *Toxicological Profile for Lead*, U.S. Department of Health and Human Services (2019).....6
- CDC, *Childhood Lead Poisoning Prevention* (2012), available at: <https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>.....5
- D.C. Bellinger, *Neurological and behavioral consequences of childhood lead exposure*, 5 PLoS Med. e115 (2008).....6
- Dusan Popvac, *Elevated Blood Lead in a Population Near a Lead Smelter in Kosovo Yugoslavia*, 37(1) Archive of Env'tl. Health 19 (1982).....24
- G.A Wasserman et. al., *The Yugoslavia Prospective Lead Study: contributions of prenatal and postnatal lead exposure to early intelligence*, 22 Neurotoxicology and Teratology 811 (2000).....24
- H.L. Needleman & C.A. Gatsonis, *Low-level lead exposure and the IQ of children. A meta- analysis of modern studies*, 263 JAMA 673 (1990).....6
- H.L. Needleman et. al., *Bone lead levels and delinquent behavior*, 275 JAMA 363 (1996) .....6
- J.M. Braun et. al. *Association of environmental toxicants and conduct disorder in U.S. children: NHANES 2001-2004*, 116 Env'tl. Health Perspect. 956 (2008) .....6
- K.N. Dietrich et. al., *Early exposure to lead and juvenile delinquency*, 23 Neurotoxicol. Teratol. 511 (2001) .....6

K.P. Olympio et. al., <i>Surface dental enamel lead levels and antisocial behavior in Brazilian adolescents</i> . 32 Neurotoxicol. Teratol. 273 (2010) .....	6
Kennedy et. al., <i>Blood Lead Levels Among Children Aged &lt;6 Years - Flint, Michigan, 2013-2016</i> , 65 MMWR Morb Mortal Wkly Rep. 650 (2016).....	4
M. Hanna-Attisha et. al. <i>Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response</i> , 106 Am. J. Pub. Health 282 (2016).....	4
R. Byers & E. Byers, <i>Late Effects of Lead Poisoning on Mental Development</i> 66 Am. J. Dis. Child. 471 (1943) .....	4

## INTRODUCTION

Dr. Joseph Graziano, Ph.D. will testify at trial on behalf of the four bellwether plaintiffs, (collectively “Plaintiffs”). He will testify that exposure to lead can cause the adverse health effects claimed by the Plaintiffs, supporting their claim that exposure to lead in Flint’s water caused them to be injured. To be sure, Dr. Graziano plays a narrow role: Plaintiffs’ other experts will testify: that the Plaintiffs have been exposed to lead (Dr. Specht); that the Plaintiffs have received a sufficient dose of lead from Flint’s water to cause lead poisoning (Dr. Michaels); that they are, in fact, lead poisoned (Dr. Bithoney); that Plaintiffs’ lead poisoning has caused neuro-cognitive effects and will, more likely than not, cause them to suffer further neuro-cognitive deficits in the future (Dr. Krishnan); and that those deficits will cause the Plaintiffs to suffer economic loss (Dr. Crakes). Dr. Graziano’s role will be to explain that lead is toxic and can be especially poisonous to children.

Decades of research has identified many adverse health outcomes associated with childhood lead exposure. More recent research has linked even relatively low levels of lead exposure to adverse health outcomes including diminished intelligence. Evidence strongly suggests a causal link between low levels of lead exposure and neurological diseases, aggressive/antisocial behavior, renal disease, and hypertension. Dr. Graziano’s testimony will aid the jury in understanding the short- and long-term injuries from which Plaintiffs may suffer now and in the future.

Defendants Veolia North America, LLC, Veolia North America, Inc., and Veolia Water North America Operating Services, LLC (collectively, “VNA”) move to exclude certain “types of opinions” of Dr. Graziano under Federal Rules of Evidence 702, 402, and 403,<sup>1</sup> and pursuant to *Daubert v. Merrill Dow Pharms.*, 509 U.S. 579 (1993). In their view, his opinions are unreliable. The truth, however, is that VNA disagrees with Dr. Graziano, and at best, has identified some subjects ripe for cross-examination.

Additionally, VNA believes Dr. Graziano’s opinions are more prejudicial than probative, are likely to confuse the jury, and that he should be excluded under Rule 403. As is true of VNA’s *Daubert* challenge, VNA’s Rule 403 challenge mistakes Dr. Graziano’s limited role in this litigation. Dr. Graziano is not Plaintiffs’ only expert; he is not being offered to prove every aspect of Plaintiffs’ case. And the authority Veolia cites in support of its request does not justify wholesale exclusion, an extreme remedy that the Sixth Circuit has repeatedly held is “the exception rather than the rule.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530.

Accordingly, VNA’s motion should be denied.

---

<sup>1</sup> To be clear, then, Plaintiffs do not understand VNA’s motion as seeking to exclude Dr. Graziano’s testimony. Nor does it appear to seek any other relief. To the extent that VNA seeks other relief, including exclusion of Dr. Graziano’s testimony as a whole, Plaintiffs respectfully submit that VNA has waived such a claim for relief and, in any event, Plaintiffs deserve a fair opportunity to oppose it.

## **BACKGROUND**

### **I. Dr. Graziano is exceptionally qualified.**

Dr. Graziano earned his Ph.D. from Rutgers University in 1971. Ex. 2, Graziano CV, at 1. He has devoted his career to understanding the consequences of exposure to metals, both on the molecular and population levels. He has been a member of the faculty of Columbia University since 1979, during which time he has served in various academic and leadership roles as a professor, chairman of the Department of Environmental Health Sciences, and Associate Dean for Research. *Id.* at 12. Dr. Graziano is a member of the Society of Toxicology and received the lifetime achievement award from the Metals Specialty Section in 2014. *Id.* He has published nearly 250 peer-reviewed articles in scientific journals, many on lead exposure. Ex. 2, Graziano CV at 4–16.

### **II. The dangers of lead exposure are well known and well documented.**

Dr. Graziano, in his report, states that as early as 1943 research shows that individuals who are lead poisoned as children “continue[] to suffer a range of mental health abnormalities” such as “aggression and violence” long after they are discharged from the hospital. *See* Ex. 1, Graziano Report, at 2.<sup>2</sup> In 1979, the “World Health Organization declared lead exposure to be the number one preventable cause

---

<sup>2</sup> Citing R. Byers & E. Byers, *Late Effects of Lead Poisoning on Mental Development* 66 Am. J. Dis. Child. 471 (1943).

of adverse developmental health outcomes in young children.” *See id.* at 2. Dr. Graziano bases the conclusions presented in his report on ample research into the “causal links between low level lead exposure and an array of adverse health outcomes that occur during childhood and even later in life.” *See id.*

Dr. Graziano identified that a “sequence of extremely poor engineering and policy decisions” exposed the residents of Flint to “a constellation of environmental contaminants in water,” which lead to “an array of adverse health effects.” *Id.* at 3. As a result, “the incidence of children having blood lead levels greater than 5 [micrograms per deciliter (µg/dL)] the EPA’s level of concern increased from 2.4% before the switch to Flint River water to 4.9% after the switch” with some of the neighborhoods with the highest water lead levels seeing an 6.6% increase. *Id.* at 4.<sup>3</sup> “No such changes were observed outside the city of Flint.” *Id.* at 4.

### **III. Numerous adverse health outcomes have been linked to childhood lead exposure.**

Considering an array of peer-reviewed literature coupled with his extensive professional experience and research, Dr. Graziano identifies several consequences of childhood lead exposure including: neurobehavioral effects; neurological diseases

---

<sup>3</sup> Citing Ex. 4, M. Hanna-Attisha et. al. *Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response*, 106 Am. J. Pub. Health 282 (2016); Ex. 5, C. Kennedy et. al., *Blood Lead Levels Among Children Aged <6 Years - Flint, Michigan, 2013-2016*, 65 MMWR Morb Mortal Wkly Rep. 650 (2016).

appearing later in life; antisocial behavior and aggression in childhood; renal disease; and hypertension. *Id.* at 4–11.

“The size of the database on the neurobehavioral effects of lead, including epidemiologic studies of children, adults and experimental studies in animals, is absolutely enormous.” *Id.* at 4. Recent research has identified a causal link between relatively low blood lead levels and adverse effects on intelligence among other things. *Id.* For this reason, the CDC has acknowledged that there is no safe level of lead exposure. *Id.*<sup>4</sup> Dr. Graziano, in relying on an “absolutely enormous” repository of literature and data, concludes “that neurobehavioral functions associated with lead exposure and blood leads less than 10 µg/dL include dimensions of function that go well beyond just intelligence and IQ scores.” *Id.* at 4, 6. Dr. Graziano identifies “altered behavior and mood (e.g., attention, hyperactivity, impulsivity, irritability, delinquency), and altered neuromotor and neurosensory function (visual-motor integration, dexterity, postural sway, changes in hearing and visual thresholds)” as neurological functions that are adversely affected by lead exposure. *Id.* at 6.<sup>5</sup> “The weight of the scientific evidence is overwhelming.” *Id.*

---

<sup>4</sup> Citing CDC, *Childhood Lead Poisoning Prevention* (2012), available at: <https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>.

<sup>5</sup> Citing Ex. 6, ATSDR, *Toxicological Profile for Lead*, U.S. Department of Health and Human Services (2019).

Dr. Graziano, in reviewing the “large” body of literature on the “association [of lead exposure] with antisocial behavior in children and adolescents,” concludes that childhood exposure to lead can cause “a variety of behavioral issues including childhood conduct disorders,” “antisocial behavior,” “aggressive behavior,” and “even criminal behavior.” *Id.* at 7.<sup>6</sup>

#### **IV. The cumulative burden of lead exposure**

Dr. Graziano states that “[c]ountless studies of dose-response relationships lead to the conclusion that there is no safe level of lead in children’s blood and any undue exposure . . . is harmful to a child’s intellectual development.” *Id.* at 11. Indeed “the evidence linking low level early childhood lead exposure to deficits in intelligence is the strongest, and capable of standing up to the rigorous criteria . . .

---

<sup>6</sup> Citing J.M. Braun et. al. *Association of environmental toxicants and conduct disorder in U.S. children: NHANES 2001-2004*, 116 *Envtl. Health Perspect.* 956 (2008); K.P. Olympio et. al., *Surface dental enamel lead levels and antisocial behavior in Brazilian adolescents*, 32 *Neurotoxicol. Teratol.* 273 (2010). H.L. Needleman & C.A. Gatsonis, *Low-level lead exposure and the IQ of children. A meta- analysis of modern studies*, 263 *JAMA* 673 (1990); K.N. Dietrich et. al., *Early exposure to lead and juvenile delinquency*, 23 *Neurotoxicol. Teratol.* 511 (2001); H.L. Needleman et. al., *Bone lead levels and delinquent behavior*, 275 *JAMA* 363 (1996); A. Aizer et. al., *Lead and Juvenile Delinquency: New Evidence from Linked Birth, School and Juvenile Detention Records*, Working Paper 23392. Cambridge, MA: National Bureau of Economic Research (2017) available at <https://www.nber.org/papers/w23392> (last accessed Jul. 27, 2021); D.C. Bellinger, *Neurological and behavioral consequences of childhood lead exposure*, 5 *PLoS Med.* e115 (2008).

regarding causality” *Id.*<sup>7</sup> Further, Dr. Graziano concludes that the “the evidence concerning childhood lead exposure and antisocial behavior and aggression is extremely powerful.” *Id.* Dr. Graziano acknowledges that evidence that childhood lead exposure can also cause neurological/neuropsychiatric diseases later in life is “suggestive and worthy of further study.” *Id.* at 11–12. Lastly, Dr. Graziano identifies “powerful and extensive evidence that lead exposure is associated with elevated blood pressure” and concludes that “low level lead exposure in children is indeed a risk factor for increases in blood pressure and the health consequences that are pursuant to hypertension. *Id.* at 12.

### ARGUMENT

VNA argues that the Court should exclude three specific elements of Dr. Graziano’s testimony. Namely, VNA argues that the Court should prevent Dr. Graziano from (1) testifying that there is no safe level of lead exposure, (2) testifying about health effects “for which science has not established a causal link to lead exposure,” and (3) testifying about events underlying the Flint Water Crisis. VNA’s opposition to parts of Dr. Graziano’s testimony is, in essence, a premature motion *in limine*.<sup>8</sup> In making this argument, VNA repeatedly challenges Dr. Graziano’s ability to provide specific causation testimony when Dr. Graziano’s role is to provide

---

<sup>7</sup> Citing A.B. Hill, *The environment and disease: association or causation?* 1965, 108 J. R. Soc. Med. 32 (2015).

<sup>8</sup> VNA’s motion should be denied in its entirety on that ground alone.

general causation testimony. Thus, as discussed below, each contention is without merit and VNA's motion should be denied in its entirety.

**I. Dr. Graziano's testimony is admissible under Federal Rule of Evidence 702.**

The main thrust of VNA's motion is its erroneous belief that Dr. Graziano's testimony must be excluded under Federal Rule of Evidence 702. VNA's argument is limited to its assertion that Dr. Graziano's opinions are unreliable. Notably, VNA does not challenge Dr. Graziano's qualifications to testify. At bottom, VNA believes that questions it may ask on cross-examination are a basis for excluding large swathes of Dr. Graziano's testimony. However, VNA's potential subjects for cross-examination are no basis at all to exclude Dr. Graziano's testimony.

**A. Legal standard under Federal Rule of Evidence 702.**

Federal Rule of Evidence 702 governs the admissibility of expert testimony in federal courts. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 588 (1993). Under Rule 702, "a proposed expert's opinion is admissible, at the discretion of the trial court, if the opinion satisfies three requirements." *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 528–29 (6th Cir. 2008). "First, the witness must be qualified by 'knowledge, skill, experience, training, or education.' Second, the testimony must be relevant, meaning that it 'will assist the trier of fact to understand the evidence or to determine a fact in issue.' Third, the testimony must be reliable." *Id.* at 529 (quoting Fed. R. Evid. 702).

The watchword of a court’s *Daubert* analysis is reliability. After all, the “overarching goal” is “assessing the ‘scientific validity and thus the evidentiary relevance and reliability’ of the principles and methodology underlying the proposed expert testimony.” *United States v. Langan*, 263 F.3d 613, 621 (6th Cir. 2001) (quoting *Daubert*, 509 U.S. at 594–95). “Four inquiries guide the reliability analysis: Is the technique testable? Has it been subjected to peer review? What is the error rate and are there standards for lowering it? Is the technique generally accepted in the relevant scientific community?” *United States v. Gissantaner*, 990 F.3d 457, 463 (6th Cir. 2021); accord *Nelson v. Tennessee Gas Pipeline Co.*, 243 F.3d 244, 251 & n.5 (6th Cir. 2001).

The inquiry isn’t a “definitive checklist or test.” *Daubert*, 509 U.S. at 593. On the contrary, the inquiry is inherently a “flexible one,” *Nelson*, 243 F.3d at 251 (quoting *Daubert*, 509 U.S. at 594), and must of course “be ‘tied to the facts’ of a particular ‘case.’” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999) (quoting *Daubert*, 509 U.S. at 591). It is unsurprising that “no single factor [above] disposes of a reliability inquiry.” *Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998). Furthermore, the factors above are not exhaustive; the Court can consider whether “expert testimony [was] prepared solely for purposes of litigation, as opposed to testimony flowing naturally from an expert’s line of

scientific research or technical work.” *Johnson v. Manitowoc Boom Trucks, Inc.*, 484 F.3d 426, 434 (6th Cir. 2007).

Throughout this analysis, a district court exercises a “gatekeeping responsibility” as a part of this inquiry. *Daubert*, 509 U.S. at 597. But this gatekeeping function is not intended to displace the jury or the adversarial system: “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Id.* at 596.

Importantly, the Federal Rules Advisory Committee explicitly recognized that “[w]hen facts are in dispute, experts sometimes reach different conclusions based on competing versions of the facts. The emphasis in the amendment on ‘sufficient facts or data’ is not intended to authorize a trial court to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other.” *Gonzalez Prod. Sys. v. Martinrea Int’l Inc.*, Case No. 13-cv-11544, 2015 U.S. Dist. LEXIS 106480, at \*25 (E.D. Mich. Aug. 13, 2015) (quoting Fed. R. Evid. 702 Advisory Committee Notes, 2000 amends.).

Consequently, “[w]hen, as here, the parties’ experts rely on conflicting sets of facts, it is not the role of the trial court to evaluate the correctness of facts underlying one expert’s testimony.” *Micro Chem., Inc. v. Lextron, Inc.*, 317 F.3d 1387, 1392 (Fed. Cir. 2003). Courts have repeatedly cautioned that “[t]he fact-finder is entitled

to hear [an expert's] testimony and decide whether it should accept or reject that testimony after considering all factors that weigh on credibility, including whether the predicate facts on which [the expert] relied are accurate.” *Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 250 (5th Cir. 2002).

Ultimately, as the Sixth Circuit put it: “A review of the caselaw after *Daubert* shows that the rejection of expert testimony is the exception rather than the rule.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 530 (citing Fed. R. Evid. 702 advisory committee’s note, 2000 amend.).

**B. Dr. Graziano is Plaintiffs’ general causation expert and Dr. Bithoney is Plaintiffs’ specific causation expert.**

As above, Dr. Graziano’s role is only to provide general causation testimony. In its arguments to exclude Dr. Graziano’s testimony, VNA repeatedly attempts to poke holes in Dr. Graziano’s opinions by pointing to issues that go to specific, not general, causation. *See, e.g.*, VNA Br. at 9–12, 19–22. However, VNA overlooks that Plaintiffs will prove specific causation through the testimony of a separate expert, Dr. Bithoney. So, while VNA’s arguments repeatedly confuse the role of Dr. Graziano with the role of Dr. Bithoney, the two are ultimately separate experts offering separate testimony on separate issues.

For example, VNA demands Dr. Graziano present “proof of *enough* exposure to cause the plaintiff’s specific illness” and rule out “alternative causes” of Plaintiffs’ conditions. VNA Br. 9, 21. However, each of those questions is irrelevant to Dr.

Graziano’s testimony as Plaintiffs’ general causation expert. *See Adkisson v. Jacobs Eng’g Grp.*, 342 F. Supp. 3d 791, 799 (E.D. Tenn. 2018) (“Plaintiffs need not show any one individual plaintiff’s exposure level, because general causation does not require individualized proof.”). To be clear, though, Dr. Bithoney offers the type of specific causation testimony identified by VNA, and as Plaintiffs point out in opposition to the identical arguments VNA makes in its motion to exclude Dr. Bithoney’s testimony, his testimony on these issues more than sufficient.

For instance, Dr. Bithoney repeatedly rejects other potential alternative lead exposures for the Plaintiffs concluded that the lead-contaminated water ingested by the Plaintiffs caused their injuries. Ex. 7, Bithoney Dep., at 204:6–12, 207:3–208:8, 220:13–221:10, 208:7–8, 221:6–10, 397:13–19; *see also* VNA Br. at 8-9, 21 (arguing Dr. Graziano did not rule out other potential lead exposures). Dr. Bithoney asked the Plaintiffs’ parents about “environmental conditions” like “peeling paint” and “leaded dust” and ruled out those exposures as the cause the Plaintiff’s elevated blood lead levels. *Id.* at 207:3–5; 212:13–18. Dr. Bithoney was unable to find any evidence that the Plaintiffs were exposed to lead through anything but the contaminated water. *Id.* at 236:1–7.

After considering that Flint’s lead-contaminated water was the only “substantial contributing cause” of Plaintiffs’ injuries, Dr. Bithoney rules out numerous other potential causes. Dr. Bithoney employed the “well accepted method

of differential diagnosis,” a “standard scientific technique” which identifies “the cause of a medical problem by eliminating the likely causes until the most probable one is isolated. *See Pluck*, 630 F.3d at 671. In short, VNA’s objections to Dr. Graziano’s testimony related to specific causation are not only irrelevant to his general causation opinion, but those objections are meritless in view of the substantial testimony Dr. Bithoney offers.

Thus, VNA’s reliance on *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671 (6th Cir. 2011) is entirely misplaced. In *Pluck*, the court grappled with whether the plaintiff was able to show specific causation, not general causation; in fact, the *Pluck* court assumed for the purpose of their analysis of the specific causation expert that “general causation had been established.” *Id.* at 677 n.5. Of course, as Plaintiffs point out in opposition to VNA’s motion to exclude Dr. Bithoney’s testimony, this case is meaningfully distinguishable from *Pluck* in a number of ways. But most importantly, Dr. Graziano is testifying as Plaintiffs’ general causation expert and *Pluck* has no bearing on general causation. VNA also relies heavily on *Nelson* for its argument that Dr. Graziano’s testimony is unreliable because he merely “assumes that [the amount of lead the plaintiffs were exposed to] was sufficient to make them ill.” VNA Br. at 11 (citing *Nelson*, 243 F.3d at 251). Like *Pluck*, *Nelson* is primarily concerned with a plaintiff’s ability to prove specific causation.

**C. Dr. Graziano’s opinion that there is “no safe level” of lead and that any “undue exposure” is harmful is admissible because it is reliable and helpful to the trier of fact.**

**1. Dr. Graziano should be permitted to testify that there is no safe level of lead exposure.**

VNA incorrectly asserts that Dr. Graziano’s testimony that there is no safe level of lead would not be helpful to the jury. *See* VNA Br. at 8. VNA does so by arguing that Dr. Graziano cannot show that any Plaintiff’s exposure was sufficient to cause his or her “particular symptoms” and by accusing Dr. Graziano of failing to rule alternative causes of Plaintiffs’ symptoms. Defendants apparently misunderstand the narrow purpose for which Plaintiffs are offering Dr. Graziano’s testimony.

Again, Plaintiffs are offering Dr. Graziano’s testimony only to show that exposure to lead can cause certain types of harm and that those harms may be amplified for children. Dr. Graziano does not opine about the individual Plaintiffs and their “particular symptoms,” he merely expresses the opinion that lead can cause a variety of adverse health outcomes in victims of childhood lead exposure. Additionally, Plaintiffs are not offering Dr. Graziano’s testimony to rule out other causes of exposure; Plaintiffs rely on Dr. Bithoney for that specific causation testimony. Dr. Graziano did not personally examine any of the Plaintiffs nor does he make any conclusions about them as individuals. Dr. Graziano’s general causation

testimony is offered to show that lead exposure has the potential to cause negative health consequences.

VNA argues that Dr. Graziano's opinions rely exclusively on the notion that there is "no safe level" of lead exposure to justify his conclusions. What VNA is attempting to do is recast Dr. Graziano's testimony as the kind unsound "any exposure" testimony that is sometimes excluded by courts. *See* VNA Br. at 11–12 (citing cases). Again, that is a specific causation issue, not a general causation issue, but more importantly VNA overlooks the totality of Dr. Graziano's testimony. While he acknowledges that there is no safe level of lead exposure (a scientific fact backed by the research and findings of government agencies), Dr. Graziano only relies on this fact as one small component of a larger opinion; he goes on to base his full opinion upon a wealth of peer-reviewed scientific literature, and his own research, and decades of professional experience. Thus, the cases VNA cites do not actually bear on Dr. Graziano's testimony at all because he is not offering excludable "no safe level" or "any exposure" testimony.

For sure, it is accurate to say that there is no safe level of lead exposure. "Countless studies of dose-response relationships lead to the conclusion that there is no safe level of lead in children's blood and any undue exposure . . . is harmful to a child's intellectual development." *See* Ex. 1, Graziano Report, at 11. Indeed, highly respected institutions including the CDC agree that there is no "safe" level of lead

exposure. *Id.* at 5 (citing CDC 2012). Moreover, the concept that there is no safe level of lead exposure is generally accepted in the relevant scientific community. *See A Cmty. Voice v. EPA*, 997 F.3d 983, 993 (9th Cir. 2021) (“[T]here is no safe level of lead exposure. The CDC has been telling us this for years.”); *United States v. N.Y. City Hous. Auth.*, 347 F. Supp. 3d 182, 190 n.3 (S.D.N.Y. 2018) (“A recent policy statement published by the American Academy of Pediatrics' Council on Environmental Health confirms that there is no safe level of lead in blood”) Notably, VNA does not claim otherwise. Dr. Graziano is certainly not incorrect when he states that there is no safe lead level.<sup>9</sup>

For this reason, no reason exists to bar Dr. Graziano from presenting this fact to the jury. Even if he were rendering no other opinion, he could testify to this information, and it would be helpful to the jury. *See Jesa Enters. v. Thermoflex Corp.*, 268 F. Supp. 3d 968, 973–74 (E.D. Mich. 2017). As the Court noted there, “[t]he 2000 Amendments to Rule 702 did ‘not alter the venerable practice of using expert testimony to educate the factfinder on general principles.’” *Id.* at 973 (quoting

---

<sup>9</sup> To be sure, VNA’s expert, Dr. Finley, does not opine that there *is* a safe level of lead. But VNA’s larger point—that a safe level of lead may someday be established, *see* VNA Br. at 13—is preposterous. As the New York Appellate Division said of a similar argument the plaintiff there should find or conduct a controlled dose study to establish a baseline level of asbestos exposure necessary to cause mesothelioma: “Clearly no controlled dose response studies concerning unsafe levels of asbestos exposure can be ethically conducted in humans.” *Nemeth v. Brenntag N. Am.*, 183 A.D.3d 211, 228 n.6 (1st Dep’t 2020).

Fed. R. Evid. 702 Advisory Committee Notes to 2000 Amendments). “Rule 702 allows an expert to ‘testify in the form of an opinion *or otherwise*,’ which means that the expert may share his or her special knowledge with the jury in areas that might extend beyond the information known to the average juror.” *Id.* at 973–74 (citations omitted) (emphasis in *Jesa Enterprises*).

But perhaps VNA thinks that Plaintiffs’ experts stopped there—and considered nothing else—and so believes that their testimony is perhaps vulnerable under *Daubert* and its progeny. Truly, some courts (including the decisions VNA relies upon) have excluded causation opinions when an expert offers no basis for their causation opinion other than that there is no known safe level of the toxin and that there is some “proof of exposure.” *See, e.g., Nelson*, 243 F.3d, at 251. Yet, Dr. Graziano does not exclusively rely on this fact when he draws his conclusions about the impact of lead on children; he merely uses it as a starting point. As Plaintiffs explain at length in their opposition to VNA’s summary judgment motion and in other *Daubert* motions, Plaintiffs’ other experts considered numerous other data points. When Dr. Graziano’s testimony is taken as a whole and in context with the testimony of Plaintiffs’ other experts, it is abundantly clear that Plaintiffs present much more than just “no safe level” or “any exposure” testimony.

Consistent with this abundance of Plaintiffs’ expert testimony, courts grappling with the nuances of experts’ testimony in unique cases have recognized

that it is acceptable to acknowledge that there is “no safe level” of exposure if it is scientifically accurate to do so. Thus, even when courts have recognized that phrases like “every exposure counts” are not themselves *sufficient* to prove causation (and may under certain circumstances result in exclusion of the expert’s opinion), “this does not preclude such an observation as a starting point in thinking about what would or should be sufficient, nor to illustrate the potential of any exposure creating a risk of contracting mesothelioma, albeit not a substantial one.” *Carroll v. John Crane, Inc.*, Case No. 15-cv-373, 2017 U.S. Dist. LEXIS 105556, at \*33 (W.D. Wisc. July 17, 2017). Accordingly, there is no basis to exclude

**2. Dr. Graziano does not concede that there is a safe level of lead exposure.**

VNA next alleges that Dr. Graziano contradicts his testimony that there is no safe level. VNA points to a statement it elicited during cross-examination that it is “‘conceivable’ that there is a threshold at a blood lead level of 1 µg/dL below which lead exposure has no effect on intelligence.” Ex. 3, Graziano Dep., at 159:15–160:24. Likewise, he acknowledged that very brief exposures at such a low lead level “could cause a very, very small loss in the child’s intellectual capacity, but not much at all.” *Id.* at 240:2–241:6. Consistent with his general causation focus, a plain reading of this testimony shows that Dr. Graziano did not concede that exposures below 1 µg/dl have no effect whatsoever on children.

To be sure, “[a] very, very small loss” is not the same thing as no impact at all. Certainly, that statement could not be considered a concession. It isn’t much of a concession to acknowledge the “conceivable” baseline a defendant seeks to establish with their own evidence—particularly when Plaintiffs’ specific causation proofs easily clear VNA’s hurdle. Indeed, it evinces the credibility and reliability that comes with the decades of experience Dr. Graziano has. An expert’s testimony that is “substantially similar” to and does not “directly contradict” previous testimony is admissible even when there are minor differences between the two. *Cf. In re Iron Workers Local 25 Pension Fund*, Case Nos. 04-cv-40243, 07-cv-12368, 2011 U.S. Dist. LEXIS 34505, at \*19–20 (E.D. Mich. Mar. 31, 2011).

**D. Dr. Graziano’s opinion permissibly considers, but does not rely solely upon, regulatory guidance.**

For largely the same reasons, VNA’s criticism of Dr. Graziano’s consideration of regulatory guidelines is misplaced. VNA argues that because regulatory guidelines tend to be more conservative and overstate risk such that the guidelines are overprotective of human health, that such guidelines are not reliable in a litigation context for proving causation. *See* VNA Br. at 14-15. Thus, where an expert relies *solely* on exceedance of a regulatory threshold for causation, the expert’s opinion is properly excluded. *See Sutera v. Perrier Group of Am.*, 986 F. Supp. 655, 665 (D. Mass. 1997); *Allen v. Pennsylvania Eng’g Corp.*, 102 F.3d 194 (5th Cir. 1996). For example, VNA cites *Sutera*, a case where plaintiff’s expert did

not present any reliable scientific evidence but merely relied upon an EPA regulation as the sole proof of causation. *Sutera*, 986 F. Supp. at 665. VNA also relies upon *Allen* wherein a plaintiff's experts again relied solely on a regulatory standard to demonstrate causation and conceded that they would not "subject their findings to the test of peer review for publication." *Allen*, 102 F.3d at 198. Here, Plaintiffs rely upon much more than just a regulatory standard to demonstrate causation.

Plaintiffs note that the cases VNA cites deal with things like "permissible level[s]" of a toxin in an environment, *Sutera*, 986 F. Supp. at 664, and "prophylactic rules governing human exposure," *Allen*, 102 F.3d at 198, that regulatory agencies craft to prevent excessive exposures. But the CDC guidance that Dr. Graziano considers is different: It doesn't govern how much lead can be in a given environment; rather, it is simply a scientific observation by the highly reputable CDC. The CDC's conclusion that there is no safe level of lead exposure for children is not the same kind of prophylactic level that governs conduct to prevent exposures; rather, it is the same kind of statement that other scientists and public health organizations make. Consequently, Dr. Graziano should not be precluded from telling the jury about the CDC's guidance, particularly since it is the kind of guidance that experts in the field rely upon.

Nevertheless, exceedance of regulatory standards coupled with additional evidence can be relied upon in forming causation opinions. *See C.W. v. Textron, Inc.*,

Case No. 3:10 CV 87, 2014 U.S. Dist. LEXIS 34938, \*13–14 (N.D. Ind. Mar. 17, 2014); *In re W.R. Grace & Co.*, 355 B.R. 462, 476 (D. Del. Bankr. Ct. 2006) (violation of a regulatory standard plus “epidemiological studies, risk assessment, and/or other reliable methodologies” can be used to demonstrate causation); *cf. Sutura*, 986 F. Supp. at 665 (“[V]iolation of a safety regulation does not, *without more*, suffice for reliable scientific evidence of causation.” (emphasis added)).<sup>10</sup>

After all, a regulatory threshold is hardly *irrelevant* to causation; the United States Supreme Court noted in a slightly different context that regulatory guidelines, at a minimum, “suggest[]...causation.” *See Matrixx Initiatives, Inc. v. Siracusano*, 563 U.S. 27, 42 (2011) (cited in VNA MSJ Br. at 76). Indeed, it is not uncommon for courts to consider regulatory standards when examining causation. *See Poulis-Minott v. Smith*, 388 F.3d 354, 364 (1st Cir. 2004); *Pan Am Grain Mfg. Co. v. P.R. Ports Auth.*, 295 F.3d 108, 115 (1st Cir. 2002); *Bosland v. Warnock Dodge, Inc.*, 197 N.J. 543, 560 (2009); *see also Matrixx Initiatives, Inc.*, 563 U.S. at 42.

And importantly, as above, VNA fails to appreciate that in addition to regulatory guidelines, Dr. Graziano relied upon numerous other data points including extensive scientific research and his own professional experience and

---

<sup>10</sup> By analogy, regulatory guidelines can be useful in determining the appropriate standard of care, which informs an analysis of breach and causation, and so Dr. Graziano should not be barred from testifying. *See, e.g., Keir v. United States*, 853 F.2d 398, 413–14 (6th Cir. 1988).

research. Furthermore, if the regulatory guidelines indicate that there is no safe level of lead and regulatory guidelines tend to “overstate the actual” risk, a reasonable inference is that even low levels of lead are dangerously toxic.

In sum, Dr. Graziano is not relying solely upon regulatory standards and therefore there is no basis to exclude his testimony at all, particularly in light of the fact that VNA’s conduct allowed plaintiffs to be exposed to levels of lead that far exceed various regulatory standards.<sup>11</sup>

**E. The peer-reviewed literature Dr. Graziano cites supports his opinion.**

Next, VNA argues that the studies Dr. Graziano cites in his report do not support his conclusions. However, this is not a legitimate basis for exclusion. It is well-established that an expert can rely on a study without wholesale adopting or agreeing with its conclusions. *See e.g., In re Heparin Prods. Liab. Litig.*, 803 F. Supp. 2d 712, 732–33 (N.D. Ohio 2011) (expert, who was familiar with studies contrary to her opinion, nevertheless permitted to testify); *Daubert*, 509 U.S. at 590; Fed. R. Evid. 702 advisory committee’s note, 2000 amendment. This is, in fact, common: Scientific experts rely on data from published studies, but often disagree as to the appropriate interpretation of the data or importance of various factors in

---

<sup>11</sup> At most, this is an issue for a targeted motion *in limine*, *see, e.g., Cook v. Erie Ins. Co.*, Case No. 2:18-cv-00282, 2021 U.S. Dist. LEXIS 96652, at \*9–10 (S.D. Ohio May 20, 2021) and is therefore premature at this stage.

bringing about a particular outcome. *See e.g., Knight v. Boehringer Ingelheim Pharms., Inc.*, 323 F. Supp. 3d 837, 849–50 (S.D. W. Va. 2018) (expert testimony admissible where expert relied on portions of studies but disagreed with certain ultimate conclusions); *Mahaney v. Novartis Pharms. Corp.*, Case No. 1:06-CV-00035-R, 2011 U.S. Dist. LEXIS 156848, at \*32 (W.D. Ky. Sept. 12, 2011) (expert partially relied on multiple studies in forming his opinions). To suggest, as VNA does, that experts can only parrot the studies on which they rely to testify at trial, is fundamentally untrue. Dr. Graziano, considering the studies, relies upon and the data contained within them—but is allowed to form his own conclusions.

Moreover, VNA’s contention that the studies only show a “mere association” between lead exposure and illness is incorrect. VNA accuses Dr. Graziano of citing “no studies showing an association (much less causation) between lead exposure and decrements in intelligence.” VNA Br. at 16. However, the studies he cites repeatedly describe the association between lead exposure and decrements in intelligence as well as other adverse medical outcomes. *See, e.g.,* Ex. 8, G.A Wasserman et. al., *The Yugoslavia Prospective Lead Study: contributions of prenatal and postnatal lead exposure to early intelligence*, 22 *Neurotoxicology and Teratology* 811 (2000) (“[W]e have consistently found that both prenatal and postnatal exposures are related to decrements in intellectual functioning...”); Ex. 9, Dusan Popvac, *Elevated Blood Lead in a Population Near a Lead Smelter in Kosovo Yugoslavia*, 37(1) *Archive of*

Envtl. Health 19 (1982) (“Children with high [lead] concentrations were found to have significantly lower intelligence scores.”); Ex. 10, Ana Navas-Acien, *Lead Exposure and Cardiovascular Disease—A Systematic Review*, 115(3) Env’tl. Health Perspectives 472 (2007) (“We conclude that the evidence is sufficient to infer a causal relationship of lead exposure with hypertension”). The studies upon which Dr. Graziano relies upon undoubtedly support his conclusions.

VNA next attempts to discredit Dr. Graziano’s testimony by offering the testimony of its own expert, Dr. Finley. But *Daubert* analysis is not about which expert is right and which is wrong. *See Phillips v. Cohen*, 400 F.3d 388, 399 (6th Cir. 2005) (“Competing expert opinions present the classic ‘battle of the experts’ and it is up to a jury to evaluate what weight and credibility each expert opinion deserves.”). The Comments to Rule 702 explicitly acknowledge that experts can reach different conclusions, yet both be permitted to offer expert testimony under the Rules. *See Fed. R. Evid. 702 advisory committee’s note*, 2000 amendment. When two experts have a difference of opinions, it is the province of the jury to weigh the credibility of both and resolve the dispute. This is particularly true when the experts rely on different facts, interpret the facts differently, or give the facts different weight. *See Micro Chem., Inc.*, 317 F.3d at 1392; *Gonzalez Prod. Sys.*, 2015 U.S. Dist. LEXIS 106480, at \*25 (E.D. Mich. 2015).

**F. Dr. Graziano's opinions concerning potential health effects are admissible.**

VNA argues that Dr. Graziano should be barred from testifying about the range of health effects caused by lead exposure for two reasons: (1) because the plaintiffs do not claim to suffer from some of the health outcomes identified by Dr. Graziano and (2) because Dr. Graziano “concedes” that there is no causal link between lead exposure and other potential health effects.

Neither of these objections requires exclusion of Dr. Graziano's testimony. First, Plaintiffs *do* suffer from health impacts other than intelligence deficits and many of the health outcomes identified by Dr. Graziano specifically occur later in an individual's life. VNA apparently ignores the fact that the child plaintiffs will age and thus could age into an array of medical conditions that Dr. Graziano specifically indicates tend to occur later in life following childhood exposure to lead. Second, Dr. Graziano does not concede that there is no causal link between lead exposure and the potential health effects identified by VNA. Dr. Graziano does acknowledge that there is abundant evidence linking lead exposure and intelligence deficits while simultaneously acknowledging that the body of research linking lead exposure and other medical conditions while less robust not entirely unreliable. Drawing on the currently available body of research, his own research, and professional experience, Dr. Graziano does conclude that lead exposure is linked to a host of medical conditions. It is permissible to infer causation from association when that inference

is made after considering the association coupled with evidence and information about the disease or harm. *See, e.g., In re Mirena IUS Levonorgestrel-Related Prods. Liab. Litig.*, 341 F. Supp. 3d 213 (S.D.N.Y. 2018).

VNA also argues that because the plaintiffs do not suffer from some of the conditions identified by Dr. Graziano that he should not be able to testify about those conditions. In addition to impacted intelligence, the Plaintiffs do, in fact, suffer from several of the conditions identified by Dr. Graziano including antisocial/aggressive behavior and neurobehavioral effects. Ex. 1, Graziano Report, at 4–11. Dr. Graziano concludes that other health outcomes such as neurological diseases, renal disease, and hypertension appear later in life; he does not opine that people who have been exposed to lead will develop Parkinson’s disease as children. *Id.* That the Plaintiffs have not yet suffered from these conditions that specifically occur later in life has no bearing on the relevance of Dr. Graziano’s testimony. Indeed, the jury should be educated about the potential ongoing impact of childhood lead exposure and what the plaintiffs can expect later in life as a result of their exposure to lead.

Dr. Graziano’s testimony about the other medical conditions from which plaintiffs, as a result of their lead exposure, may suffer is admissible. The Sixth Circuit has repeatedly held that it is “unnecessary that the medical evidence conclusively establish with absolute certainty that the future disease or condition will occur.” *See, e.g., Sterling v. Velsicol Chem. Corp.*, 855 F.2d 1188, 1205 (6th

Cir. 1988); *Rupersburg v. Etkin Skanska Constr. Co.*, Nos. 262388, 262406, 262470, 262471, 262560, & 262561, 2006 Mich. App. LEXIS 3974, at \*8–9 (Mich. Ct. App. 2006). After all, “[t]here are no certainties in science.” *Daubert*, 509 U.S. at 590. Importantly, Dr. Graziano is not testifying that any of the specific Plaintiffs will develop such medical conditions; he is merely opining that lead exposure *can* cause them. *See* Ex. 1, Graziano Report, at 4–11.<sup>12</sup>

VNA next contends that Dr. Graziano conceded that there is no causal link between lead exposure and the medical conditions he identifies. Dr. Graziano, in considering the present state of research, does opine that peer-reviewed literature does not yet *conclusively* establish a causal link between some of the conditions he identifies. However, Dr. Graziano considers his own professional experiences and research alongside the current body of scientific literature and concludes that there is, in fact, *ample reason to believe that there is a strong causal link* between lead exposure and the identified medical conditions. *See* Ex. 1, Graziano Report, at 11–12; Ex. 3, Graziano Dep., at 140:20–24. He describes the evidence contributing his conclusions as “significant,” “suggestive,” and “worthy of future study.” *Id.* In point of fact, Dr. Graziano opines that the evidence suggesting a causal link between “early

---

<sup>12</sup> VNA further argues that this testimony would confuse the jury. There is no risk for confusion because a reasonable jury can receive and understand testimony that it is generally possible for a victim of toxic lead poisoning will develop other ailments later in life because of it. Careful jury instruction, not exclusion, is the best solution to VNA’s concerns. *See Daubert*, 509 U.S. at 596.

life lead exposure” and the development of “neurological/neuropsychiatric diseases later in life” is “strong.” *See* Ex. 1, Graziano Report, at 11. Further, Dr. Graziano conducts review of literature by noted epidemiologist Dr. Ana Navas-Acien who concluded that lead exposure is causally linked to hypertension and points to “powerful and extensive evidence that lead exposure is associated with elevated blood pressure.” *Id.* at 11 (citing Ex. 10, Navas-Acien et al., 2007). He concludes that “low level lead exposure in children is indeed a risk factor for increases in blood pressure and the health consequences that are pursuant to hypertension.” *Id.*

#### **IV. Dr. Graziano’s opinions “fit” the facts of this case.**

Next, VNA argues that Dr. Graziano’s opinions about the health effects of lead exposure do not “fit” the issues in this case. For expert testimony to “fit,” “there must be a connection between the [expert opinion] being offered and the disputed factual issues in the case in which the expert will testify.” *See In re Northwest Airlines Corp. Antitrust Litig.*, 197 F. Supp.2d 908, 914 (E.D. Mich. 2002).

VNA states that under Michigan law Plaintiffs must prove both general and specific causation. VNA Br. at 24. True enough; but no expert need do it all alone. Notably, VNA doesn’t cite any case that says a single expert must prove a plaintiff’s entire case on causation. Here, Dr. Graziano’s role in Plaintiffs’ case is to prove general causation. As indicated above, Plaintiffs rely upon Dr. Bithoney for specific causation testimony, Dr. Michaels for dose and toxicology, and Dr. Krishnan for

pertinent neuropsychological diagnoses. In reality, it's not that Dr. Graziano's opinions do not satisfy the requirements of general causation; it's that VNA recognizes Dr. Graziano's conclusions are credible and adverse to it.

Dr. Graziano, relying upon decades of professional experience and research and a litany of peer-reviewed literature, concluded that childhood lead exposure is linked to a variety of medical conditions. In short, Dr. Graziano's conclusions enjoy a valid factual basis, and his testimony there "fits" the facts of the case. VNA's disagreement with his conclusions are (at most) matters for whatever "cross-examination" or "presentation of contrary evidence" VNA can muster, not exclusion. *Clay*, 215 F.3d at 669.

**V. There is no basis to exclude Dr. Graziano's brief commentary on the background of the Flint Water Crisis.**

Lastly, VNA argues that any general impressions Dr. Graziano has on the events underlying the Flint Water Crisis should be excluded, especially any commentary that paints VNA in a negative light. Obviously, Plaintiffs are not offering Dr. Graziano as an expert on the FWC itself. Rather, Plaintiffs are offering other experts, including Drs. Humann and Hoaglund, to explain important background information. Of course, Plaintiffs' parents and other lay witnesses will also testify about it as well. The short overview Dr. Graziano provides in his report does not undergird any of the opinions he will offer. Any passing remarks on the FWC that Dr. Graziano makes merely constitute an introduction as to why he

prepared his report and why he is testifying at all. Therefore, Dr. Graziano's brief summary of the background circumstances under which he prepared his reports should not be excluded, but is at most an issue for motion *in limine*, which is premature at this time.

### **CONCLUSION**

Accordingly, the Court should deny VNA's motion to exclude Dr. Graziano.

Dated: July 29, 2021

Respectfully submitted,

**LEVY KONIGSBERG LLP**

/s/ Corey M. Stern  
Corey M. Stern  
Renner K. Walker  
Madeleine L. Skaller  
605 Third Ave., 33rd Fl.  
New York, NY 10158  
Tel.: (212) 605-6200  
Cstern@levylaw.com  
Rwalker@levylaw.com  
MSkaller@levylaw.com

**NAPOLI SHKOLNIK PLLC**

/s/ Hunter J. Shkolnik  
Hunter J. Shkolnik  
Patrick J. Lanciotti  
270 Munoz Rivera Avenue, Suite 201  
Hato Rey, Puerto Rico 00918  
Tel.: (787) 493-5088  
Hunter@napolilaw.com  
Planciotti@napolilaw.com

### **CERTIFICATE OF SERVICE**

I, Renner K. Walker, hereby certify that on July 29, 2021, the foregoing brief and attached exhibits were served on all counsel of record via the court's ECF system.

/s/ Renner K. Walker  
Renner K. Walker